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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,132	12/31/2007	Naotoshi Kirihara	ISHIKAWA.002AUS	8860

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EXAMINER	
XU, XIAOYUN	
ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
12/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,132	KIRIHARA ET AL.	
	Examiner	Art Unit	
	ROBERT XU	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☒ Claim(s) *4-6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/11/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4-6 are objected to because of the following informalities: No table should be in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchimura et al. (Analytical Sciences, 2003) (Uchimura) in view of Walker et al. (US 2005/0256384) (Walker).

Regarding the pending claims Uchimura teaches a method of analyzing dichlorobenzene by laser ionization mass spectrometry using supersonic jet/resonance-enhanced multiphoto ionization (see abstract), the method comprising:

Obtaining specific wavelength spectrum of dichlorobenzene which concentration is known (see page 388, right col. 1st paragraph, Figure 2), selecting a specific wavelength from the specific wavelength spectrum (see page 388, right col. 1st paragraph, Figure 3), showing the ion signal intensity corresponding to the concentration of dichlorobenzene at the selected specific wavelength (see page 388, right col. 1st paragraph, Figure 3).

Uchimura teaches that the method can be applied for analyzing of dioxin and its derivative, such as polychlorinated dibenzo-*p*-dioxine (PCDD) and polychlorinated dibenzofuran (PCDF). 1,2,3,4,6,7,8-HpCDD (heptachloro dibenzo-*p*-dioxin) as recited in Claims 1 and 4, and OCDD (octachloro dibenzo-*p*-dioxin) as recited in Claims 1 and 5, are one of polychlorinated dibenzo-*p*-dioxine (PCDD). OCDF (octachloro dibenzofuran) as recited in Claims 1 and 6, is one of polychlorinated dibenzofuran (PCDF).

Uchimura does not specifically teach selecting plurality of wavelengths for each analyte in making calibration curve and using the calibrated factors to form system of linear equation and then determining the concentration of analyte by solving the system of linear equation.

Walker teaches using multiple wavelengths to determine glucose level in human blood and to distinguish glucose molecule from water molecule in human blood. First, Walker scans the absorption spectrum for glucose and water molecule. From the spectra, he finds two wavelengths at which the absorption factor for glucose is most significant and the absorption of water is reversely significant (see paragraph [0056],

Figure 4A and paragraph [0057], Figure 4B). Glucose and water has reversely significant different absorption factors at 1060 nm and 980 nm (see Figure 4A and 4B). Then two linear equations are formed for the total absorption of glucose and water at the two wavelengths (see paragraph [0026]). Since the absorption factors of glucose and water at the two wavelengths are calibrated (see paragraph [0056] and [0057]), the concentration of glucose and water can be derived by solving the linear equation system (see paragraph [0027]).

At the time of the invention, it would have be obvious to one of ordinary skill in the art to select multiple wavelengths measurement and solving system of linear equation to derive the concentration of multiple analytes as taught by Walker in Uchimura's method, because this allows determining concentrations of multiple analytes in one sample.

Uchimura does not teach selecting specific wavelength suitable for dioxin as recited in Claims 1, 4 and 5 or for dioxin derivatives as recited in Claims 1 and 6. The court has held that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." (*In re Aller,* 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)). In that regard, every analyte has its own specific resonance-enhanced multiphoto excitation wavelength. It would have been obvious to one of ordinary skill in the art to optimize the specific wavelength for maximum signal for each analyte by routine experimentation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT XU whose telephone number is (571)270-5560. The examiner can normally be reached on Mon-Thur 7:30am-5:00pm, Fri 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/18/2008

/Yelena G. Gakh/
Primary Examiner, Art Unit 1797

RX